Please type a plus sign (+) inside this box -> + PTO/SB/21 (08-00) Approved for use through 10/31/2002. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Application Number 09/659,860 TRANSMITTAL Filing Date September 11, 2000 **FORM First Named Inventor** Hong Zhang (to be used for all correspondence after initial filing) Group Art Unit 1635 **Examiner Name** J. Schultz Total Number of Pages in This Submission ISIS0054-100 (RTS-0201) Attorney Docket Number ENCLOSURES (check all that apply) After Allowance Communication to Assignment Papers Fee Transmittal Form (for an Application) Group Appeal Communication to Board of Fee Attached Drawing(s) Appeals and Interferences Appeal Communication to Group Amendment / Response Licensing-related Papers (Appeal Notice, Brief, Reply Brief) Petition After Final Proprietary Information Petition to Convert to a Affidavits/declaration(s) Status Letter Provisional Application Power of Attorney with Revocation Other Enclosure(s) Extension of Time Request and Change of Correspondence (please identify below): Address 1) Table A Terminal Disclaimer Express Abandonment Request 2) Statement Higher 3 Request for Refund 3.73(b) with exe Assignment Information Disclosure Statement CD, Number of CD(s) 3) Return Post Card Certified Copy of Priority Remarks Document(s) Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Paul K. Legaard, Registration No. 38,534 Individual name Signature Date September 18, 2003 **CERTIFICATE OF MAILING** I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope

addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on this date: September 18, 2003 Typed or printed name Paul K. Legaard, Registration No. 38,534 Signature Date September 18, 2003

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be send to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I

RNAssistant Commissioner for Patents
Washington, DC 20231

Sir:

POWER OF ATTORNEY WITH REVOCATION AND CHANGE OF CORRESPONDENCE ADDRESS

RECEIVED

SEP 2 6 2003

TECH CENTER 1600/290

I hereby revoke all previous powers of attorney or authorizations of agent given in the patents/applications identified in Table A attached hereto, and appoint PLANTER STATES AND ADDRESS OF TABLE AN

BAR COE 44 B BERE
PATENT TRADEMARK OFFICE

Practitioners at Customer Number: 34138

as my/our attorney(s) or agent(s) to prosecute the patents/applications identified in Table A, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the Correspondence Address for the patent applications identified in Table A to:

Practitioners at Customer Number: 34138

I am the:

Applicant/Inventor.

Assignee of record of the entire interest. (A statement under 37 CFR 3.73(b) is enclosed.)

Respectfully submitted,

ISIS PHARMACEUTICALS, INC.

Date: 7/22/2003

By:

Name: B. Lynne Parshall
Title: Executive Vice President

::ODMA\PCDOC\\$\PHILAT\\\821739\L

I

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents Washington, DC 20231

Sir:

STATEMENT UNDER 37 CFR 3.73(b)

Applicant, ISIS Pharmaceuticals, Inc., a corporation, states that it is:

the assignee of the entire right, title, and interest of the patents/applications identified in Table A attached hereto.

The extent (by, percentage) of its ownership interest is 100% in the patents/applications identified in Table A.

a copy of the pertinent assignment from the inventor(s) of the patent applications identified in Table A is enclosed herewith.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Respectfully submitted,

ISIS PHARMACEUTICALS, INC.

Date: 7/22/2003

Ву: __

Name: B. Lynne Parshall Title: Executive Vice President DOCKET NO.:RTS-0201

"Express Mail" Label No.: EL263653945US Date of Deposit: 9/11/2000

ASSIGNMENT

WHEREAS, we Hong Zhang, residing at 3339 Cadencia St Carlsbad CA 92009 and Andrew T. Watt, residing at 1500 Shadowridge Dr.. Apt. 154 Vista CA 92083 hereinafter referred to as the assignors, are the joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, entitled Antisense Modulation of caspase 7 Expression; filed concurrently herewith; and

WHEREAS, Isis Pharmaceuticals Inc. hereinafter referred to as the assignee, of 2292 Faraday Ave, Carlsbad, California 92008 is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to each of us in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers, to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

DOCKET NO.:RTS-0201

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

We further authorize and direct our attorneys to insert below* the serial number and filing date of said application as soon as the same shall have been made known to them by the United States Patent Office.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Dated:

STATE OF California) ss.
COUNTY OF Lan Diego) ss.

This 64n day of September 2007, before me personally came the above-named Hong Zhang, who executed the foregoing Assignment in my presence, and who acknowledged to me that he/she executed the same of his/her own free will for the purposes set forth therein.

LANE B.D. SCHWARTZ Commission # 1196197 Notary Public - California San Diego County My Comm. Expires Sep 13, 2002

Notary Public for Can Deogo4 My commission expires:

DOCKET NO.:RTS-0201

Notary Public for San Diego

My commission expires:

Andrew T. Watt

Dated: 09/09/00

STATE OF California

COUNTY OF San Diego

SS.

Assignment in my presence, and who acknowledged to me that he/sheexecuted the same of his/her own free will for the purposes set forth

therein.

LANE B.D. SCHWARTZ Commission # 1196197 Notary Public - California San Diego County My Comm. Expires Sep 13, 2002

[SEAL]

Table A

ENGA-	15./		Т	-		·-							
Title		ANTISENSE INHIBITION OF PTEN EXPRESSION	ANTISENSE OLIGONUCLEOTIDE MODULATION OF HUMAN MDM2 EXPRESSION	ANTISENSE MODULATION OF HUMAN MDM2 EXPRESSION	ANTISENSE MODULATON OF DAMAGE SPECIFIC DNA BINDING PROTEIN 1, P127 EXPRESSION	ANTISENSE MODULATION OF CASPASE 7 EXPRESSION	ANTISENSE MODULATION OF EIF2C1 EXPRESSION	ANTISENSE MODULATION OF PROTEIN KINASE R EXPRESSION	ANTISENSE MODULATION OF PI3K P85 EXPRESSION	ANTISENSE INHIBITION OF PI3K P85 EXPRESSION	ANTISENSE MODULATION OF RIBONUCLEASE L EXPRESSION	ANTISENSE MODULATION OF CASPASE 3 EXPRESSION	
Art	≓ 5	1635	1635	1635	1635	1635	1635	1635	1635	1635	1635	1635	
Examiner		M. Schmidt	M. Shibuya	J. Epps	J. Schultz	J. Schultz	J. Schultz	To Be Determined	J. Zara	J. Zara	K. Lacourciere	S. McGH CEI	RECEIVED EP 2 6 2003 WIER 1600/2900
Inventor(s)		B. Monia et al.	L. Miraglia et al.	L. Miraglia et al.	I. Popoff et al.	H. Zhang et al.	D. Ward et al.	D. Ward et al.	B. Monia et al.	B. Monia et al.	D. Ward et al.	H. Zhang et al.	
Filing Date	issue Date	May 24, 2000 September 4, 2001	March 26, 1998 May 29, 2001	March 26, 1999 February 6, 2001	December 6, 2000	September 11, 2000	November 8, 2001	September 13, 2001	November 20, 2000	June 25, 1999 August 8, 2000	September 12, 2001	January 18, 2000 October 16, 2001	LA1\1848876\1
Serial No.	Docket No.	09/577,902 6,284,538 ISIS0004-102	09/048,810 6,238,921 ISIS0052-101	09/280,805 6,184,212 ISIS0052-102	09/731,457 ISIS0053-100	09/659,860 ISIS0054-100	10/007,078 ISIS0055-100	09/953,611 ISIS0056-100	09/715,983 ISIS0057-100	09/344,521 6,100,090 ISIS0057-101	09/954,679 ISIS0058-100	09/484,617 6,303,374 ISIS0059-100	::ODMA\PCDOCS\PHILA1\1848876\1

Howes	Section 1	,									·•		
Title		ANTISENSE MODULATION OF SMAD6 EXPRESSION	ANTISENSE MODULATION OF CASPASE 6 EXPRESSION	ANTISENSE MODULATION OF HELICASE- MOI EXPRESSION	ANTISENSE MODULATION OF TOLL-LIKE RECEPTOR 4 EXPRESSION	ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 5 EXPRESSION	ANTISENSE MODULATION OF CASPASE 2 EXPRESSION	ANTISENSE MODULATION OF CASPASE 9 EXPRESSION	ANTISENSE MODULATION OF CASPASE 9 EXPRESSION	ANTISENSE MODULATION OF RECQL5 EXPRESSION	ANTISENSE MODULATION OF RECQLS EXPRESSION	ANTISENSE MODULATION OF RECOLS EXPRESSION	ANTISENSE MODULATION OF RECQL2 EXPRESSION
AT:		1635	1635	1635	1645	1635	1635	1635	1639	1635	1635	1635	1635
Examiner		M. Schmidt	J. Zara	J. LeGuyader	To Be Determined	J. Zara	J. Schultz	To Be Determined	A. Wang	To Be Determined	To Be Determined	K. Lacourciere	S. McGarry
Inventor(s)		L. Cowsert	A. Watt	D. Ward et al.	J. Karras et al.	B. Monia et al.	H. Zhang et al.	H. Zhang et al.	A. Watt	D. Ward et al.			
Filing Date	issue Date	October 4, 2000 May 20, 2003	October 4, 2000 May 20, 2003	May 10, 2001 September 3, 2002	November 19, 2001	May 25, 2001	September 20, 2000	October 15, 2002	September 11, 2000 December 10, 2002	December 3, 2002	September 9, 2002	March 1, 2001	March 1, 2001 June 4, 2002
Serial No.	Docket No.	09/679,298 6,566,131 ISIS0060-100	09/679,299 6,566,135 ISIS0061-100	09/853,768 6,444,466 ISIS0062-100	10/001,863 ISIS0063-100	09/865,993 ISIS0064-100	09/667,018 ISIS0065-100	10/271,887 ISIS0066-100	09/659,845 6,492,170 ISIS0066-101	10/309,362 ISIS0067-100	10/238,443 ISIS0067-101	09/798,185 ISIS0067-102	09/798,096 6,399,378 ISIS0068-100

RECEIVED

SEP 2 6 2003

CENTER 1600/2900

Filing Date Issue Date	Inventor(s)	Examiner	Art Unit	Title
	D. Ward et al.	K. Lacourciere	1635	ANTISENSE MODULATION OF RECQL4 EXPRESSION
[D. Ward et al.	J. Zara	1635	ANTISENSE MODULATION OF RECQL EXPRESSION
	B. Monia et al.	M. Schmidt	1635	ANTISENSE MODULATION OF PTEN EXPRESSION
1	M. Graham et al.	S. McGarry	1635	ANTISENSE MODULATION OF CD81 EXPRESSION
	K. Dobie et al.	To Be Determined	1645	ANTISENSE MODULATION OF PAZ/PIWI DOMAIN CONTAINING PROTEIN EXPRESSION
	B. Monia et al.	J. Epps	1635	ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 6 EXPRESSION
	B. Monia et al.	A. Wang	1635	ANTISENSE MODULATION OF SMAD7 EXPRESSION
	B. Monia et al.	To Be Determined	1651	ANTISENSE MODULATION OF SMAD7 EXPRESSION
	I. Popoff et al.	M. Schmidt	1635	ANTISENSE MODULATION OF DAMAGE- SPECIFIC DNA BINDING PROTEIN 2, p48 EXPRESSION
1	L. Cowsert	M. Schmidt	1635	ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 8 EXPRESSION
	L. Cowsert	TEC	1635	ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 9 EXPRESSION



RECEIVED

SEP 2 6 2003

ECH CENTER 1600/2900

Serial No.	Filing Date Issue Date	Inventor(s)	Examiner	Art Title Unit	Title	•
Docket No. 09/487,445 6,258,600	January 19, 2000 July 10, 2001	H. Zhang et al. M. Shibuya	M. Shibuya	1635	1635 ANTISENSE MODULATION OF CASPASE 8 EXPRESSION	
ISIS0079-100 10/181,177 SIS0079-101	July 12, 2002	H. Zhang et al.	To Be Determined	1632	4. Zhang et al. To Be Determined 1632 ANTISENSE MODULATION OF CASPASE 8 EXPRESSION	



RECEIVED

SEP 2 6 2003

TECH CENTER 1600/2900